MORALE BOOSTER 4

FOR

UNITED FOR OUR EXPANDED SPACE PROGRAMS

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I. Death Don't Have No Mercy In This Land

"An obscure scientist doing routine research work discovers that a common household product, long thought harmless, has a disastrous delayed effect capable of destroying all life on this planet by the year 2000. The huge amount of product X already manufactured will eventually claim thousands of lives....The scientist warns the world...months later, three major scientific studies all confirm the ominous threat....We've all seen the movie, and we know what happens next. The entire world swings into action....Wrong. The world does not swing into action. The factories are not shut down. And...it's not a movie. Doomsday by the year 2000. The threat is real, but the supposed agent of our destruction is too improbable to be taken seriously. How can a world that has lived three decades with the specter of nuclear annihilation believe it will be done in by a blast of hair spray or underarm deodorant?..." New Times, page 27, March 1975, by Michael Drosnin (emphasis in original).

The vision presented by the scientist does seem to be beyond credibility and it would be no wonder if he was not taken seriously when he first presented it. In this particular case, the doomsday vision is comprised of three elements: freon, ozone, and the interaction between. The scientist says, "Ozone is necessary for life on this planet as it shields biological processes and organisms from ultraviolet radiation. Freon, a hydrocarbon containing chlorine, destroys ozone. This process is underway as vast amounts of freon are being released into the atmosphere from spray cans of many, though not all, pressurized-container products. Therefore, Doomsday in twenty-five years." The world, distracted by a multitude of classical and obvious disasters, does not place much credence in such statements. Twenty-five years is a short interval of time but can appear enormous when one is obsessed with the habits and routines of daily living. So, a certain forgetfulness sets in. It goes without saying that the freon manufacture and dispersion into the upper atmosphere does as well.

It is not certain that the processes creating the catastrophe of the ozone layer's destruction are inevitable or will lead inexorably to the above conclusion. Nonetheless, we can take no comfort from its presentation. Whether or not humanity faces extinction from pollution of the ozone is a rhetorical question, as humanity faces extinction from something. The human population is so large; the masses straining for industrialization and the consumer society are so numerous and determined; the sophisticated pollution products and processes of the super-industrial nations so varied and intense; it is inconceivable that the planet, or humanity

at the very least, does not confront imminent Cataclysm and Collapse. Certainly, if numbers of learned people expostulating this view are any measure of the validity of the opinion, this conclusion is verified, as we are daily informed of the destruction we are wreaking and have been wreaking for many decades if not centuries upon the biosphere (and the environment in general). Even the most optimistic and deluded (the two go hand-in-hand) concede the inevitability (some would say necessity) of the situation worsening. It's a hard rain a-gonna fall, in the words of a contemporary minstrel poet. Death don't have no mercy in this land, in the words of an older one.

Where is the hope for an expanded space program in such visions as these, we must ask as, in order to maximize our efforts' effects, we must ask ourselves this question of all developments in the world-social-reality. Let us begin with the realization that the most striking characteristic of technology today, besides its expansiveness, is its limitation of alternatives possible for resolution of the complex and serious problems which it creates. No matter how appealing the idea may be simply to cease our technological ways and replace them with 'simpler' and not so catastrophic ones, it does not represent a viable option. Since the greatest part of the world's economy is based upon this technology; and whereas the products of it are esteemed above all others in the underdeveloped nations (which comprise the majority of them, both in population and number of states); it is clear the only solutions possible are technological solutions, as the adoption of other ways would bring as much catastrophe through social disorganization and insufficiency of nontechnological means for the world's needs as confronts us by continuance of our polluting and unrestrained ways. We must also bear in mind that the simpler ways which seem so alluring often only appear viable because they were, before their effects could become known, replaced by technology.

The technology needed, however, for resolving our dire predicament has not been developed. In order for it to be developed, moreover, it is first necessary to collect enormous amounts of data about the functionings of the Universe, in general, and our planet, in particular. It is not simply a question of dusting off some old plans in some Governmental Agency's or private inventor's files and funding them vigorously. No, we must learn a great deal more first, more than we ever thought imaginable, possible, or desirable. The way in which we may most efficaciously proceed with this giant informational task is to place ourselves in space and establish our laboratories in the void. Here, we will be challenged to degrees orders of magnitude higher than on Earth as the environment in which our studies take place will be totally alien. Consider the Moon. It is a completely different world than Earth (or Venus or Titan or Neptune or etc.). Is it not obvious that the unknown there is of a vastly different character than here? Is it not obvious what this portends for science (which is the only thing that can save us from our technology, we recall) and knowledge? We cannot survive on the planet; we can only survive in the solar system.

II. Voices From the Outside World

"Japan launched a 191-pound satellite, the nation's sixth, into orbit Monday for scientific observations, space officials announced." The Los Angeles Times, Part I, page 6, February 25, 1975, from AP.

"The Soviet Union put eight Cosmos satellites into orbit from a single rocket Friday, the official press agency Tass reported. The satellites,

numbered 711 to 718, are carrying scientific equipment to continue space studies begun by the earlier Cosmos satellites." The Los Angeles Times, Part I, page 10, March 1, 1975, from Reuters.

"Jupiter's pulsating magnetic field, stretching out 9 million miles and squeezed in volume by three-fourths by the solar wind, may be created by a number of ring currents, like electric generators, within the planet's seething interior. Scientists sifting through data returned by the Pioneer 11 spacecraft last December said such a multiple generator system could explain Jupiter's intense bursts of radio energy. Earlier measurements by Pioneer 10 had indicated only a simple magnetic envelope with a single 'generator' such as earth's, investigators said, but this apparently is not so. Planetary magnetic fields, they noted, are believed produced by the motions of liquid material in the interior of planets through mechanisms similar to those of electric dynamos. Inside Jupiter's pulsating field, which wobbles and tilts as the planet rotates, is a high-energy particle pattern, belts of radiation 10,000 times more intense than earth's Van Allen belts. Although there is no way of knowing if life forms exist on Jupiter, the scientists said, the planet seems to have the necessary building blocks for life in its atmosphere and conceivably could support living organisms in its polar regions. They pointed out that the swift, vertical circulation of the Jovian atmosphere apparently would carry any life forms down into areas too hot to support life, except at the relatively warm and stagnant polar areas where the atmosphere circulates more slowly. Pioneer data also has disclosed that the cloud tops that hide the largest planet in the solar system are substantially lower at the poles than at the equator and those at the south pole are lower than those in the north polar region. Scientists are curious about the number of electrons found circulating close to the planet--10 times more than had been predicted by earth-based radio studies. If the Pioneer findings stand up, astronomers said, various celestial theories will have to be reviewed." The Los Angeles Times, Part II, pages 1 and 8, March 10, 1975 by Marvin Miles (emphasis added).

"A group of astronauts will make an unprecedented visit April 27 to the prime Soviet space center, the Russian verson of Cape Canaveral, a NASA spokesman said Wednesday. U.S. technicians will make a follow-up visit to the launch site at Tyuratam on May 12 and remain for 12 days, and a third group of top NASA officials will spend May 19 and 20 at the site, according to Lynn Lunney, U.S. technical director of the Apollo-Soyuz Test Project, the docking mission planned for American and Soviet spacecraft next July. The visits were arranged at the instigation of the Americans, Lunney said. Thus far U.S. space personnel have been denied a first-hand look at the Soviet spacecraft and equipment which will be used on the mission, scheduled for July 15. Lunney described a visit as a 'kick-the-tire-look.' A group of cosmonauts made an extensive visit recently to the Kennedy Space Center at Cape Canaveral. The only Westerners known to have visited the Russian launch site were top French political officials. The prime American test project crew of Thomas P. Stafford, Vance D. Brand and Donald K. Slayton, along with three-man back-up crew, will make the first visit by Americans to Tyuratam. Tyuratam is located in a desolate region about 1,000 miles southeast of Moscow. The Soviets also are reported to have a second launch site for manned flights, as well as another for unmanned flights, but are secretive about all their space installations. The Americans made it clear to the Soviets sometime ago that the test mission would not be flown unless they were permitted to see the actual equipment. The second group of U.S. visitors will consist of eight to (ten) technicians who will make a series of communications tests with the Soviet equipment. The third group will include Lunney and

George M. Low, deputy NASA administrator, and other high NASA officials. Sources at the Johnson Space Center here made it clear the Americans probably would not be going to the Russian launch site if they had not pressed for the visit. Lunney said Wednesday there was a 'very good' chance of a future joint flight by U.S. and Soviet spacemen, probably in the early 1980s, with the Americans using the planned shuttle spacecraft to rendezvous or dock with a Russian spacecraft. He said American and Soviet space officials would discuss the possibilities of such future joint space flights this fall. 'We would use the shuttle as the spacecraft just like we used the Apollo service module,' Lunney said." The Los Angeles Times, Part I, page 26, February 27, 1975 by Nicholas C. Chriss.

"The tiny craft had been in space for 16 months and was nearly out of steering fuel. Yet flight controllers at Pasadena's Jet Propulsion Laboratory last week managed to keep Mariner 10 alive and performing well through its third - and closest-encounter with the solar system's innermost planet. As it passed only 200 miles above Mercury's scorched surface, the half-ton robot swooped over the planet's north polar region, sent back some 300 closeup pictures and confirmed a puzzling fact; that Mercury has an innate magnetic field. The four-hour flyby was an unexpected bonus at the end of an already successful $100 million mission. Three months after its launch in November 1973, Mariner 10 passed Venus and took the first closeup pictures of the cloud-shrouded planet. Then, slowed by Venusian gravity, it plunged toward the sun, approaching Mercury in March and again in September 1974. On those flybys, Mariner got the first close look at the planet and detected a weak magnetic field that some scientists thought might be caused by Mercury's interaction with the solar wind, a stream of charged particles from the sun. Last week Mariner established beyond doubt that Mercury's field was distinctly its own. Scientists believe that the earth's magnetism is generated by a dynamo-like motion within its liquid outer core caused by the earth's rotation. But whether Mercury also has a liquid core is a subject of debate. Even if it does, the planet probably rotates too slowly (once every 68 2/3 earth days) for the dynamo effect to occur. Thus, as Mariner fell silent in its eternal orbit of the sun, it left behind a major mystery; How did Mercury acquire its magnetic field?" Time, Page 62, March 31, 1975.

"The Salyut 4 space laboratory, home to two cosmonauts for a month, is still working perfectly and has completed more than 1,000 revolutions of the earth, the official Soviet press agency Tass said Tuesday. Launched last Dec. 26, the orbital laboratory completed its 1,077th revolution at midday Moscow time, Tass said. Soyuz 17 cosmonauts Alexei Gubarov and Georgi Grechko returned to earth Feb. 9, after a month-long space mission, most of it aboard the three-ton Salyut 4." The Los Angeles Times, Part I, page 6, March 3, 1975 from UPI.

"As a result of UCLA research, American and Russian astronauts will 'manufacture' a space-made product that can drastically change man's communications on earth through improved computers, telephones and television sets. Aboard the Apollo-Soyuz Test Project mission, planned for later this year, will be a small electric furnace in which elements will be fused to produce optical fibers, embedded in a matrix, with qualities that cannot be duplicated in an earth-bound laboratory. The scientific experiment was developed over the past three years by two UCLA engineering professors, Drs. Albert S. Yue and Cavour W. Yeh. Optical fibers can transmit light, and signals, images and other types of information through lightwaves. Scientists have often attempted to grow the most useful long and continuous fibers in a matrix, where they can be bunched closely together, but have been frustrated by terrestrial gravity. The gravity

field, explains Professor Yue, sets up convection currents and vibrations that prevent the growth of continuous and homogeneous fibers during the fusion process. However, in the natural vacuum and weightlessness of space, the fibers can achieve a length, continuity and homogeneity unmatchable on earth. Their experiment in space, say the UCLA engineers, will produce a perfectly fused mixture consisting of lithium fluoride fibers embedded in a sodium chloride matrix. The resultant optical fibers, which will retain their characteristics on earth, can transmit light and information from one end of the fiber." University Bulletin, page 112, February 10, 1975 (emphasis added).

"They're in the suburbs of Moscow and Peking and they're in the Brazilian jungle 1,000 miles up the Amazon. They're in the mountains of Iran, the deserts of Algeria and the snows of Alaska. They're even springing up on top of the giant rigs pumping oil from the North Sea. These are the visible signs of what is today one of the fastest growing businesses on earth--the huge antennae that serve as telephone and television links between the earth and the dozen or so orbiting communications satellites. Communication by satellite has more than come of age; it is booming its way around the world. More than 90 countries now communicate by satellite. Most of the communicating goes through the seven satellites built by the Hughes Aircraft Corp. put into orbit from Cape Canaveral by Comsat and operated by Comsat for the interantional consortium (one third owned by Comsat) known as Intelsat. The Soviet Union and the People's Republic of China are two of the few nationas who are not Intelsat members. The Vatican belongs. Bolivia and Oman this month became the 88th and 89th countries to join Intelsat, whose worldwide traffic is growing at the dizzy rate of 20% per year. Iran is so infatuated with the speed, reliability and economy of satellites that it is thinking of buying and orbiting its own. So is Saudi Arabia, Indonesia, and IBM. Canada already has its own. So does the Soviet Union and Western Union. Japan will have its own by 1977. France and Britian jointly orbited last month an experimental satellite called Symphonie and expects (sic) to have an operational satellite before the decade ends. AT&T, RCA and Comsat all will have domestic satellites hovering over the United States by 1980....The satellites hovering in synchronous...orbit...rarely miss a signal, and they're never disturbed by wind, rain or any other natural disturbance. The few times they've failed to relay a message have come from electronic misunderstandings, in which the satellite antennas end up aimed at the moon instead of earth....Satellite lifetimes have outlived their most optimistic forecasts....If nothing else, the satellites have cut the cost of conversation anywhere in the world. In 1947, it cost $12 to call London from New York. Today, it costs $5.40. So cheap has satellite television transmission become that last month the 'earth station' at Manaus, Brazil, carried four hours of television every day to the people in the Amazon jungle....Comsat goes on reaping rich revenues from the communications satellite boom. Partly a public company and partly owned by the U.S. government, Comsat last year made $36.3 million in profit, up 45% from the year before." The Los Angeles Times, Part I-A, pages 6-8, February 26, 1975 by Thomas O'Toole (emphasis added).

"In centuries past, the ancients peopled Mars with gods. Later, writers populated the Red Planet with the strange creatures of fiction. And today, speculation on extraterrestrial life is more intense than ever before. Is there life on the Red Planet? Or echoes of past life? Could Mars be, perhaps, a molecular Garden of Eden rich with the precursors of future life? No one knows. Even the prestigious National Academy of Sciences can only theorize. But the most momentous space flight since

astronauts first landed on the moon could provide electrifying answers. The $950 million Viking/Mars mission, to be launched this summer, will make the first direct search for extraterrestrial life-extinct, extant, or expected-on the harsh, dry planet that appears most like the earth. Cameras aboard two bug-like landers could spot some form of life, possibly unusual vegetation, but it appears more probable...that Martian life, if it exists, will be in the form of micro-organisms. Certainly the finding of even the most elementary life forms elsewhere in the solar system would be a sensational discovery, proving that life is not unique to earth and probably integral part of the evolution of the Universe. It would strengthen the liklihood that intelligent beings, even technical civilizations, exist on planets of distant stars, perhaps evolved from the same chemical processes that created earth's great diversity of life. And it probably would spur long-term commitment to a radio-telescope search for such civilizations, as well as eventual exploration of Mars with manned expeditions to examine the planet in detail. The Viking Mission is the most challenging planetary effort yet undertaken, involving two orbiter-lander combinations and a pair of miniature automated laboratories that will conduct a scientific search for life on the Martian surface. The dual landing operation follows countless telescopic and spectroscopic studies and four successful U.S. probes (out of six shots), each of which revolutionized man's concept of Mars while leaving many mysteries unexplained.....the space agency will launch the first of two orbiter-lander combinations next August 11 and the second on August 21, barring delays, with the hope of landing the first Viking on July 4, 1976, the nation's 200th birthday. The combination spacecraft will be placed on different tracks around the planet for initial investigations by the orbiters-terrain photos, temperature mapping and water vapor studies-of preselected landing sites chosen with the aid of Mariner 9 data. Once the touchdown sites are verified or new ones are selected, the landers (developed by Martin Marietta in Denver) will be detached from the orbiters (produced by the Jet Propulsion Laboratory) and descend to the surface....In landing, they will touch down automatically on three legs in the same manner that early...Surveyor craft landed on the moon. The two orbiters will continue to circle the planet, serving as radio relay links for primary communications between the landers and earth and returning television pictures, temperature readings and other sensor data...the Viking landers will be looking for life with their complicated, 33-pound laboratories developed in Redondo Beach by TRW, Inc., astounding systems that can carry out the search fully automatically, if necessary...." The Los Angeles Times, Part II, Pages 1 and 8, March 3, 1975, by Marvin Miles (emphasis added).

III. Progress Is Our Most Important Product

From the beginning, the central concept generating activity by United For Our Expanded Space Programs has been unity. Although understanding of this idea may be gained by many approaches, the emphasis we place in the now-moment lies on linkage amongst those individuals driven by images/visions of Great Space. As should be clear by now, it is our first and most forcefully held contention that space is the place for everyone. This may strike the reader as too bold a statement in the context of the most vociferous elements within the world-social-reality. Pollution, overpopulation, energy shortages and maldistributions, food crises and increasing violence in the world appear to be far more pressing concerns than the structure of Jupiter or the lighting effects on the Moon. And what if the skies of Titan are blood red? Are not our own fast approaching this appearance? The life brewing or brooding in Jupiter's atmosphere may be little

consolation for the starving rich and poor of Bombay. Yet, admidst all this gloom, an inevitable aspect of the issues comes closer into view. Something must be done. For to do nothing is to do the most subtle acts of all. The processes set into motion by Industrialization have not ceased, only grown more complicated and inexorable; it is simply a question of mastery now or destruction. Mastery, now, or Destruction. UFOESP, now!, or Destruction. Unity.

Unity means many things to many entities. We have spoken this before and therefore repeat ourselves. In this instance, we mean unity to be the gathering together of all forces directed towards the immediate, absolute, irrevocable experience of outer space. We gravitate towards Mercury; we manufacture atmosphere from the sands of Mars. Nothing can be accomplished in isolation; the binding forces of the atoms are only considered in the masses; we need no individuality here. Individuals, however, are another matter; the basic components of any system are always fundamental. In this instance, we begin with the context or set of the world-social-reality. We recognize that the components or elements comprising the initial construct are individuals. Individual human beings. And whatever emissaries or strandees from whatever space or time which may impinge on or be approachable from here. We state the obvious; we Unite For Our Expanded Space Programs. We may think in metaphors; we may picture black holes or neutron stars and caption this image as this organization.

What is essential for the unity is the working together implied by the many examples and allusive statements made thus far. We need not all carry the same banner; in truth, it would be preferable if we did not, if we rather adopted many devices, emblems, tokens, ensigns and totems to display in the struggle for greater and greater focus on space exploration, experience and exploitation for humankind. We must advance on all fronts; we surge forward into space.

The past month has seen more inevitable growth in the organization, further refinement in its structure and activities. A checking account has been opened, the Treasury exceeds $100, our first advertisement has been printed (and has generated exciting response), plans proceed rapidly for advertising for membership and our program in a respected astronomical journal, while personal contacts bring brighter prospects into our domains for development. Although the progress we make appears to be needlessly methodical, it must be understood that the task we undertake is a vast one and thus should not be attempted without discipline and vision. We catalyze the consciousness of the American people; we petition the people's representatives to study the question and come to the obvious conclusion. Space is the place because that's all there is. The Earth itself is a celestial body; it radiates light just as it receives it. It exists as an alien body though we interact with it in the most intimate fashion. As ecological awareness increases, the inevitable spatial awareness follows. Nine worlds in our immediate reach! Nine universes within our grasp! It seems preposterous, yet the worldly efforts we make now to educate the public as to the benefits of space, in all its myriad aspects, are perfect reflections of that metaphor. Nine worlds to conquer, nine universes to fear. To explore the spaceways 'twixt moon, planet and star is to expose oneself to the vast continuum of the vacuum. We advance on all fronts. Naturally, we are prophets. It is a simple question of realizing the wealth to which we have access if not possession and then integrating the remainder. We expand; that is the key to an expanded space program.

IV. Stimulus/Response---------March 27/28, 1975

"Thank you for your information on the goals you have for the space program. I got the information where I work, for a Congressman from Florida. He has seen the information and he also liked your sticker. At this time I would like to request additional information and more stickers be sent to my mother's junior high school physics and chemistry classes. Please send as many stickers as you can spare. We are fully in line with your thinking. Keep up the race into space. Please find enclosed some stamps." Joe Foley, 10848 Fairchester Drive, Fairfax VA 22030. One of the most important underlying concepts to the space publicity campaign is the notion that the future is now. In his work Future Shock, Alvin Toffler spoke of a new condition afflicting people living in what he termed 'superindustrial' societies. This condition was characterized by a time differential of some proportions between the transformations of social milieu and the transformations of psyche correspondent with healthy adaptation to the social transformations. Naturally, Toffler was concerned with the end product of this process and warned that we must confront the issue of this disturbance in society and resolve it before it dominated all other forces in our culture. Toffler was and is correct in his analysis but his message arrived too late: the future is now. What must be done to survive the rigors of our new lives is to resist not the future's march into us. Beyond this general relevance to our program this point has is the realization that we must place as much importance on the future as it does on us in all our activities to generate an expanded space program. To draw the obvious conclusion: we propagandize the young. It should be noted that these efforts are in harmony with the social realities of persons under twenty with respect to their rearing and the outside world that was on view for them. People from 14 to 18 represent the true vanguard of our movement as for them space achievements and events are integral to their world view--there was no time for them when man's activity in space was not direct and immediate. All this is to say, yes, definitely some bumper stickers to your mother's classes!

"...The more intense my research becomes, the lesser I feel alone in my beliefs and hopes. Private industries are increasingly more a part of this research scheme. Research is being choked off financially, though, when we've gotten to the point where we (as a nation) should make the plunge. Joint government-business projects should be encouraged, as should international co-efforts. The impact it has toward the economy, society, science and education, along with international co-operation, can easily be looked at as a thread sewing together global peace. It quite sensibly should be looked in and from every direction. Somewhere in most persons' sub-thoughts, space has occupied a place. Hopefully, as your work spreads, these sub-thoughts will emerge. For even if a body couldn't say space is the place, he'd soon acknowledge that space is a place; I hope we'll look." Delmar Tompkins, 4515 Bancroft, #3, San Diego CA 92116. Your image of space exploration being a thread sewing a garment of peace is quite striking. It is also to the point. In the present world, with violence blossoming from one point on the globe to another, it might seem naive to speak of any specific effort, such as an expanded space program, no matter how massive, as having these global effects. Yet, such claims for space are true. The significance that space exploration holds for humanity stems from the inclusive character of its operation. Space is not only unimaginably vaster than any one or group of us, it is also unimaginably more alien. Consequently, it is immeasurably more distracting than the general practices of the general

practitioners of human affairs. There is room enough for everyone and thing in Great Space. There is even more time.

"The moon? Yes, it would be fun to jump fifty feet. I just might consider it...." Jane Subic, 5247-15th N.E., Seattle WA 98105. The typical tone of this journal has been philosophical, even those times when a feverish presentation has predominated, brought on by the potency of the vision of Great Space. As the task we have set ourselves is enormous, though well within our capabilities, the tendency has been to emphasize the 'profounder' implications and aspects of the space adventure (we use the term 'profounder' in the sense of 'abstract and fundamental'). Although this inclination must be the primary one of the movement at such critical junctures as these initial maneuvers, it is vital that we realize the purely esthetic and entertaining potentialities represented by sport, art, and general leisure. We exist within a multi-layered world of sensation. The sensorial world is inextricably linked with the singularity of the planet. Recalling earlier comments that the solar system consists of nine worlds, complete and unique in their own rights, we can see the implications for simple moment to moment existence in space exploration and travel. The commonest acts would be new and fresh experiences. This is without consideration of the question of new possibilities of behavior and experience opening up to our interests and talents (to be sure, to replace many old ones no longer viable or feasible in the new environment). Yes, the skies of Titan <u>are</u> red and this experience might have greater repercussions on human society than the new industrial processes possible on the Moon. Space is the place, for the athletes as well as the astrophysicists.

"This evening I noticed a copy of the <u>Reader</u> which has been floating about in seemingly weightless wonder. Placing my trajectory on a glide-path toward it and through it, I inevitably collided with your ad. In brief, I co-ordinate a research organization (United Futurist Association) which embraces concepts probably paralleling your interests. It's still a small and shakey group pursuing ideas and goals which may appear downright impractical, ridiculous and impossible to most people. One of the primary goals of the UFA (which has consumed hours upon hours of meetings, group discussions, speculation and planning) is the challenge of deploying an advanced form of research installation somewhere in the southwestern desert region of the United States. We call this the Starbase Project. Starbase would employ design concepts of a futuristic nature. Being in a desert environment, the major thrust of research at Starbase would be in the aero-space domain. Extensive rocket experimentation could be carried out, including static test firings and launches where performance could be monitored by Starbase. To eliminate excessive costs, newer, cheaper and possibly untried forms of building materials capable of withstanding desert conditions and many other extremes will have to be investigated. Since living, dining and rec facilities may eventually be included in the construction of Starbase, techniques to recycle food and energy must be explored. Such a research base could gradually be made self-sufficient. Presently, the UFA is concerned with the need to initiate a series of expeditions to the desert where the surrounding terrain can be studied for a possible Starbase construction site. Various experimental packages including test-rockets can be carried along on these expeditions. (Incidentally--if nothing else, camping out in the desert can be loads of fun!) UFA is also exploring the realm of the space-shuttle, orbiting space stations, star-drive, and ultimately--the utilization of space-technology for the creation of an environment where peace may blossom for all mankind here on Earth. I would really enjoy hearing from you. Perhaps we can share energies, if not, then at least the exchange of a few

ideas. Imagination is needed to mobilize knowledge, and enthusiasm conquers all obstacles." James R. Prince, United Futurist Association, P.O. Box 17059, San Diego CA 92117. (Emphasis added) Such a succinct example of the potentiality for action on the space adventure makes it difficult to elaborate on the necessity for an expanded space program. It seems so obvious why such a change in national priorities is in order! There can be no question that benefit will accrue to those who create greater linkages with one another through greater interaction. Unity, if we repeat a thousand times at once we cannot say it enough, is the key. What we must prepare is a revolution: in spirit, persepctive and national outlook. For this, we will need the obvious advantages concomitant with many individuals with their many resources enlisting one another's aid in common purpose. Our purpose is space; our necessity is the space experience. This selfishness is legitimized by its availability to all--all with the discipline, patience, inventiveness, and courage to shape themselves to fit there. Yes, imagination and enthusiasm will carry us through; they are our finest and most potent assets next to unity itself. So, an offer to enlist. Will it be formally reciprocal?

IV. The Space Machine

Although it has been assumed that the reader has a refined appreciation of metaphor in the writing of these expositions of the inevitability and hastening necessity for an expanded space program, the necessity for this appreciation must be explicitly stated in preface to the remarks that comprise the bulk of this section. This is due to the heavily connotative character of the central metaphors to be used here. When we speak of Great Space or the Spaceways, we understand our liberty with the term as considerable, due to the strong poetic and visionary elements in their construction. When we speak of the Space Revolution, on the other hand, and the Space Machine, the same liberty can only be taken with the precisest explication. The question remains the same: how may the event be generative of support for expansion into space? We investigate all possibilities; we support complete freedom to use everything to the best advantage. In a sense, we are imperialists. In a profounder but more subtle sense we are, in the words of Timothy O'Holleron, "communists-capitalists".

Such militaristic language would seem to bring with it far too many negative connotations to be worth risking the reader's patience for mere potency. Although the aims of the Space Revolution are completely peaceful and, consequently, the tactics, too (as we firmly believe the ends/means dichotomy to be a false one) we adopt this loathsome language for its completely clear character. No one questions the meanings of terms such as retreat or attack or victory. This is not to say that such questioning is not necessary; indeed, the lack of such questioning of these militaristic terms is a primary factor contributing to the world's grave, and increasingly hopeless, condition. Our concern here is with the autonomic conceptual response associated with these words and phrases.

At this point it is necessary to point out that we, in our jingoist usage, will be unrestrained. In fact, as alluded earlier in this article, we will be the practitioners of the severest discrimination in our speech. These combative metaphors are used because they clearly establish the character, direction, and commitment of our program; yet to use them loosely or rampantly would be to invite the actualization of the illusion and the consequent/inevitable situation in which one must either believe in the new demon or perish with it, as it were. It is also necessary to make clear our awareness and understanding of the negative effects that must come with this usage. We expect them to be minimized by the fundamental nature of our efforts for an expanded space program. As the goals,

methods and effects of the space campaigns are nonviolent (though this is not to say they are not forceful and imbued with great power), there is every reason to believe the inextricable unwanted consequences of the language will be compensated by the increased expression of constructive events in other dimensions. All this is to say that there are always conquests and reversals; it is a question of choosing the most balanced plan.

For decades, social analysts have spoken about the War Machine. We propose a substitution: the Space Machine. It is common knowledge that vast populations are employed by the War Machine. The men and women in the Armed Services, the Civil Service, the factories and universities developing and producing the deadliest materiel number in the millions. In truth, one may argue that the entire nation is geared to war. As abhorrent as this situation is, it should come as no surprise that military expenses tend to rise, no matter what else falls. To cut back war expenditures seriously would be to disrupt enormously the War Machine. To do that would be to plunge the economy into depression. We know this. We hate it. It stays the same.

It is readily argued that the economic dislocations arising from impressive decreases in defense spending would be ameliorated by the new priorities, such as urban renewal or pollution control or the fight against racism and sexism, and their material needs. More and better housing, cleaner and safer streets, increased expression of human potential through the cultivation of everyone's possibilities would seem to be endeavors that would require great industry on the parts of millions of people. The difficulty lies in the nebulosity of the new priorities' referents. When one questions the purpose of defense, the answer is protection from the nation's enemies. The nation's enemies are the Communists. The Communists are found in Communist countries. These nations proclaim their existence and may be measured on any number of quantitative dimensions: number of people; yearly coal, steel, wheat, cotton, etc. production; allies; and so on. It is also clear what counters are necessary: more of everything, especially weapons (a rather straightforward concept). It needs also to be noted that centuries upon centuries of human effort have been concentrated on military tasks. This has two principal results. One, the subject is understood fairly well. Two, it is one of the most reinforced human behaviors known. Thus, militarism represents a gigantic vested interest with every imaginable human type with something to gain from it. On the other hand, when one questions the purpose of the new priorities, one receives the answer the improvement of the general and individual condition of the populace. Here, instead of easily definable factors, such as people living in one country or another, we must deal with things hotly debated and mostly unknown. Clearly, fewer rats and diseases and better nutrition are desirable. Yet there is intense argument as to what constitutes good food and diets; hospitals may be free of rats but none want to live in them; new pollutants are discovered each day and it is argued that we are creating new ones faster than we discover the old; and the nature of improvements extends beyond the range of the material and concrete into cultural habits and states of mind. As many communities have discovered, removing a slum is no easy matter; urban renewal may be characterized as transitory blight. The situation is worsened by the very newness of the new priorities. It has only been within the past two or three decades that the quality of the environment has been a general concern of the populace, for example. Clearly, no matter how desirable the usually voiced alternatives to the War Machine may be, they present problems with respect to their precise meaning for the general populace.

We assert space is the place. We offer a newer alternative still: the colonization of the solar system. We are convinced of the rightness

of this course because it substitutes peace for war yet carries the clarity of conception that war possesses. Equally important, we are convinced of the rightness of this course because its side-effects will result in resolutions of many problems in the traditional areas of social reform. The Space Machine will mobilize vast portions of the populace, will cause the least economic disruption due to its similarities to the War Machine in its industrial and technical operations, and will indirectly aid in the struggles for a cleaner environment, healthier population, and saner world. Is it not better to substitute a known mechanism than an enigmatic one when the implications of the change, no matter what change is instituted, are so enormous? Earth is not enough; the future is now!

VI. Condiments

To increase public support for expanded space exploration, it is vital, as stated often in these pages, that we be open to all avenues of propagandization and education of the masses for the colonization of the solar system. We must appreciate the ridiculous and the sublime. For example, each of us should adopt blatant attitudes in support of our goal. We answer the phone, "Space is the place!". We present our membership cards when being newly introduced. For another example, each of us should encourage those we can to view the possibilities of their talents if their creative energies were directed to that end. United For Our Expanded Space Programs offers a passive membership in the organization to anyone who submits an article to its official organ, Morale Booster, which is accepted for publication. This passive membership is converted to active upon the submission and acceptance of a second article to Morale Booster by the same person. In addition, similar terms will apply for other artistic media. Ballads, blues, and boasters are all welcome. All space-warp drives are elligible. Every space revolutionary may apply. There's nothing like the future! A Moonbase (Starbase!) by '89!

------J. Graham Maughan